Name:

Teacher:

Honors Geometry, Period

**Honors Geometry**

HW 1: Linear Patterns

**Dot Pattern 1**

|  |
| --- |
| Create the next figure:  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-08-27 at 10.56.12 AM.png |
| Create a table:   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  | |
| Create an expression: |

|  |  |
| --- | --- |
|  | Draw the next figure: |
| |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Figure Number | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | Number of Tiles |  |  |  |  |  |  |  |  |  |  | | |
| Equation: | |

**Complete the following questions in your graph paper notebook. You do not need to copy the question, but make sure it is answered completely.**

**Burgers:** At Burger King you can get 2 Whoppers for $5.

|  |  |
| --- | --- |
| 1. How many burgers could you get with $40? | 1. How much would 20 burgers cost? |
| 1. Graph this situation. 2. How should you label your axes? 3. Does this graph make a line? Why does this make sense? 4. What is the slope? What does this number mean? | |

**Real World Relationships:** Decide whether or not you think the relationships below are linear. Justify your answers.

|  |  |
| --- | --- |
| 1. The cost of a movie ticket over time | 1. The total distance you can drive in terms of the number of gallons of gas in your gas tank |

**Fitting Data with Linear Functions:** Assume that both the relationships below are linear.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Year | Population | | 2002 | 23,400 | | 2006 | 27,800 |   *What will the population be in 2020?*  *What are the units for slope?* | |  |  |  |  |  | | --- | --- | --- | --- | --- | | ***w*, number of weeks** | 0 | 2 | 4 | 6 | | ***P(w)*, number of rats** | 1000 | 1080 | 1160 | 1240 |   *How many rats will there be in 20 weeks?*  What are the units for slope? |